

NFPA DESIGNATION 704

HAZARD RATING	HEALTH	0
4=Extreme		
3=High	FIRE	1
2=Moderate		
1=Slight	REACTIVITY	0
0=Insignificant		
	SPECIFIC HAZARD	NONE



MATERIAL SAFETY DATA SHEET

SECTION 1 NAME AND PRODUCT

MANUFACTURER'S NAME: SUNNEN PRODUCTS COMPANY
 ADDRESS: 7910 Manchester Ave.
 St. Louis, Mo. 63143
 United States of America

CONTACT: Terry Heller
 EMERGENCY PHONE NO: 314-781-2105
 APPROVED BY: Terry Heller
 TITLE: Manager, Materials R/D
 DATE: August 15, 1987

TRADE NAME, COMMON NAME OR SPECIFICATION: **PLH-100/101/105 AND
 BP-99 HYDRAULIC OIL**

CHEMICAL FAMILY: PETROLEUM HYDROCARBONS AND ADDITIVES.
 D.O.T. SHIPPING CLASS: COMBUSTIBLE LIQUID.

CLASSIFICATION: PETROLEUM OIL N.O.S.
 IDENTIFICATION NUMBER: UN1270

SECTION 2 HAZARDOUS INGREDIENTS/IDENTITY (PER 29 C.F.R. 1910.1200(g))

COMMON NAME	CHEMICAL NAME OF COMPONENTS	CAS NO	Wt.%	OSHA PEL mg./cu. m.	ACGIH TLV-TWA mg./cu. m.	CARCINOGENIC
OIL	REFINED MINERAL OIL	64742-54-7	> 95	5 (mist)	5 (mist)	N

FOR FURTHER SAFETY AND HEALTH INFORMATION REGARDING THE COMPOSITION OF THIS MATERIAL CONTACT SUNNEN PRODUCTS, INDUSTRIAL SALES DEPARTMENT.

SECTION 3 PHYSICAL & CHEMICAL CHARACTERISTICS

SPECIFIC GRAVITY (WATER=1)-----.87
 PERCENT VOLATILE BY WEIGHT-----<1%
 BOILING POINT----->600 F (316 C)
 VAPOR PRESSURE (mm Hg)-----<.1mm Hg @ 68 F (20 C)
 VAPOR DENSITY (AIR=1)-----No applicable information found.
 EVAPORATION RATE-----NEGLECTIBLE
 SOLUBILITY IN WATER-----NEGLECTIBLE. MATERIAL IS COMPLETELY SOLUBLE IN COMMON HYDROCARBON AND CHLORINATED HYDROCARBON SOLVENTS SUCH AS MINERAL SPIRITS OR TRICHLOROETHANE.
 REACTIVITY IN WATER-----NOT REACTIVE
 APPEARANCE AND ODOR-----ASTM 4.0 LIQUID.

SECTION 4 SPECIAL PRECAUTIONS

HANDLING AND STORAGE: NONE Refer to section 7.

SECTION 5 CORROSIVITY AND REACTIVITY DATA

STABILITY: MATERIAL IS STABLE UNDER NORMAL CONDITIONS OF TRANSPORT AND STORAGE.
 POLYMERIZATION: HAZARDOUS POLYMERIZATION WILL NOT OCCUR.
 INCOMPATIBILITY (MATERIALS TO AVOID): STRONG OXIDIZING AGENTS
 HAZARDOUS DECOMPOSITION PRODUCTS: CARBON MONOXIDE FROM COMBUSTION

SECTION 6 HEALTH, FIRST AID AND MEDICAL DATA

PRIMARY ROUTE(S) OF ENTRY ARE: INGESTION and SKIN ABSORPTION.
 ACUTE AND CHRONIC HEALTH EFFECTS AND EFFECTS OF OVEREXPOSURE

ACUTE: ORAL TOXICITY (RATS): LD50: > 5 G/KG 0/10 Rats died at this dosage level. Slightly toxic (estimated)--based on testing of similar products and/or the components.
 DERMAL TOXICITY (RABBITS): LD 50: > 2 G/KG 0/10 Rabbits died at this dosage level. Slightly toxic (estimated)--based on testing of similar products and/or the components.
 INHALATION TOXICITY (RATS): Not established. Harmful concentrations of mists and/or vapors are unlikely to be encountered through any customary or reasonably foreseeable handling, use, or misuse of this product.
 EYE IRRITATION (RABBITS): Expected to be non-irritation.--Based on testing of similar products and/or the components.
 SKIN IRRITATION (RABBITS): May cause slight irritation on prolonged or repeated contact.--Based on testing of similar products and/or the components.

CHRONIC: The base oils in this product are severely solvent refined and/or severely hydrotreated. Two year mouse skin painting studies of similar oils showed no evidence of carcinogenic effects. Severely solvent refined and severely hydrotreated mineral base oils have been tested by dermal application to rats 5 days/week for 90 days at doses significantly higher than those expected during normal industrial exposure. Extensive evaluations including microscopic examination of internal organs and clinical chemistry of body fluids, showed no adverse effects.

EMERGENCY FIRST AID

INHALATION: Remove from further exposure. If unconsciousness occurs, seek immediate medical assistance and call a physician. If breathing has stopped, begin mouth to mouth resuscitation. **EYE CONTACT:** Remove contact lenses (if wearing) and flush eyes with water for 15 minutes. Seek medical attention to check for possible irritation. **SKIN CONTACT:** Wash contact areas with mild non-abrasive soap and water. **INGESTION:** Not expected to be a problem. However, if greater than 1/2 liter (Pint) ingested, immediately give 1 to 2 glasses of water and call a physician, hospital emergency room or poison control center for assistance. Do not induce vomiting or give anything by mouth to an unconscious person.

SECTION 7 HANDLING, STORAGE AND USE PROCEDURES

NORMAL STORAGE AND HANDLING: Store away from heat or flame. If stored outdoors, store so as to shed water.

NORMAL USE: May cause skin irritation and/or defat the skin on prolonged or repeated contact. Practice good personal hygiene by washing hands several times each day. Launder contaminated clothing before reuse. Avoid wearing clothing soaked with fluid. Avoid prolonged inhalation of mist or vapors. Do not transfer to unlabeled containers. Do not reuse containers for other materials or purposes. Do not cut, braze, weld, solder, or pressurize container as doing so may cause container to EXPLODE, potentially causing serious injury or DEATH. FOR INDUSTRIAL USE ONLY. Not suitable for use in or around household or dwelling. All precautions detailed on the container label apply to partially full or empty containers. Do not attempt to clean as residue is difficult to remove. Empty drums should be completely drained, properly closed and returned to a drum conditioner to be commercially cleaned. Otherwise, containers should be disposed of in an environmentally safe manner and in accordance with applicable governmental regulations.

STEPS TO BE TAKEN IN CASE OF LEAKS OR SPILLS: Absorb on fire retardant absorbent. Gather and dispose of in accordance with applicable regulations. Notify Coast Guard if spill could reach any waterway (1-800-424-8802).

WASTE DISPOSAL METHODS: Dispose of in accordance with applicable federal, state and local laws, regulations, rules, orders and ordinances.

SECTION 8 PERSONAL PROTECTION INFORMATION

RESPIRATORY PROTECTION: If use conditions give rise to excessive mist (greater than 5 mg/cu M) use a NIOSH approved respirator rated for mineral oil mist or forced ventilation to reduce mist exposure to well below TLV levels.

VENTILATION-LOCAL: Normal. MECHANICAL: Required if use conditions give rise to levels greater than 5 mg/cu M.
OTHER: No applicable information found.

SKIN PROTECTION: No special equipment required. However, good personal hygiene practices should always be followed.
Do not wear oil soaked clothing.

EYE PROTECTION: Always wear NIOSH approved eye protection when working around or operating machinery.

OTHER EQUIPMENT: Oil-impervious apron if desired.

MEASURES TO BE TAKEN DURING REPAIR AND MAINTENANCE OF CONTAMINATED EQUIPMENT THAT HAS BEEN IN CONTACT WITH THIS MATERIAL: Same as for petroleum lubricating oil. Remove traces of material if soldering, welding, brazing, cutting or other process involving ignition sources to prevent a fire hazard.

SECTION 9 FIRE AND EXPLOSION HAZARD DATA

FLASH POINT-----395 F (202 C) ASTM D-92

FLAMMABLE LIMITS--- LEL: 0.6 UEL: 7.0

EXTINGUISHING MEDIA: Carbon dioxide, foam, dry chemical and water fog.

SPECIAL FIRE FIGHTING PROCEDURES: Firefighters must use recommended protective equipment.

UNUSUAL FIRE AND EXPLOSION HAZARDS: Sealed containers may explode if exposed to extreme heat.

NOTICE

THIS MATERIAL SAFETY DATA SHEET ("MSDS") IS SUPPLIED PURSUANT TO THE OCCUPATIONAL SAFETY AND HEALTH ADMINISTRATION'S HAZARD COMMUNICATION RULE (THE "RULE"), 29 CFR 1910.1200. THIS MSDS IS BEING FURNISHED TO THE IMMEDIATE PURCHASER OF THE MATERIAL TO WHICH IT REFERS WITHOUT REPRESENTATION OR WARRANTY AS TO THE COMPLETENESS OR ACCURACY OF ANY INFORMATION OR RECOMMENDATIONS CONTAINED HEREIN.

THIS MSDS IS OFFERED SOLELY TO COMPLY WITH THE RULE AND IS NOT INTENDED TO CREATE ANY LIABILITY OF ANY KIND ON THE PART OF SUNNEN PRODUCTS COMPANY ("SUNNEN"). IN NO EVENT WILL SUNNEN BE RESPONSIBLE FOR ANY DEATH, INJURY OR DAMAGE OF ANY NATURE WHATSOEVER RESULTING FROM THE USE OF, RELIANCE UPON, OR MISUSE OF THE MSDS. NO REPRESENTATIONS OR WARRANTIES, WHETHER EXPRESSED OR IMPLIED, OF MERCHANTABILITY, FITNESS FOR A PARTICULAR PURPOSE, OR ANY OTHER NATURE, ARE MADE HEREUNDER. THIS MSDS IS NOT INTENDED AS A RECOMMENDATION FOR USES WHICH INFRINGE VALID PATENTS OR EXTEND LICENSES UNDER VALID PATENTS.

THIS MSDS IS FURNISHED UPON THE EXPRESS CONDITION THAT ALL PERSONS RECEIVING IT WILL MAKE THEIR OWN DETERMINATION AS TO ITS SUITABILITY FOR THEIR PURPOSED PRIOR TO USE. RESPONSIBILITY FOR COMPLIANCE WITH APPLICABLE FEDERAL, STATE OR LOCAL REGULATIONS CONCERNING DISSEMINATION OF THE MSDS AND SALE AND USE OF THE MATERIAL TO WHICH IT REFERS RESTS SOLELY UPON THE PURCHASER.